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# Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use

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) IB Docket No. 98-172  
) RM-9005  
) RM-9118  
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However, GSO/FSS operators cannot deploy their systems until sufficient, contiguous useable spectrum is available to provide service to customers using mass-produced, ubiquitous

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small transmit/receive earth terminals. In order to achieve contiguous spectrum for Ka-band systems, it may be necessary to relocate certain fixed service (FS) operators from the 18 GHz band, specifically cable television relay service ("CARS") licensees.

Both terrestrial and satellite operators will benefit from segmentation of the 18 GHz band. Commenters in this proceeding agree that FS and FSS operators cannot reasonably share spectrum where small satellite earth stations are ubiquitously deployed and that the public interest will be best served by separating, into dedicated sub-bands, FS operations from the operation of these satellite earth stations. Further, most commenters recognize that relocation of some existing FS facilities will be necessary to effectuate this goal.

Loral believes that a minimum of 250 MHz of contiguous unshared and unencumbered spectrum in the 18 GHz band is required for GSO/FSS satellite operators to launch and operate commercially viable Ka-band systems<sup>2</sup> but urges the Commission to designate an additional 250 MHz of contiguous spectrum for primary GSO/FSS use. By providing for 500 MHz of contiguous clear spectrum, the Commission will maximize the opportunity for the successful deployment of new satellite services for consumers. Several satellite operators support band plans which would provide access to at least 500 MHz of contiguous spectrum for downlinks to ubiquitous terminals.<sup>3</sup>

The Hughes proposal would provide for 500 MHz of primary GSO/FSS spectrum in the 18.1-18.6 GHz band. This plan would also provide for 500 MHz of exclusive spectrum (at 17.8-18.1 GHz and 18.6-18.8 GHz) and 400 MHz of shared spectrum (at 19.3-19.7 GHz) for fixed

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<sup>2</sup> Comments of Loral at 3 (filed Nov. 19, 1998).

<sup>3</sup> See Comments of Hughes at 13; TRW at 5; and Lockheed Martin at 2.

point-to-point operations.<sup>4</sup> The Hughes proposal also suggests that replacement spectrum outside the 18 GHz band be made available to CARS licensees.<sup>5</sup> Lockheed Martin and TRW suggest a modified band segmentation plan that would provide 500 MHz of spectrum at 18.3-18.8 GHz for GSO/FSS use on a sole primary basis.<sup>6</sup> To permit the successful deployment of ubiquitous user terminals, such redesignation would need to be accompanied by a relaxation of the PFD limit applicable in the 18.6-18.8 GHz band that currently protects space sciences.<sup>7</sup> The Commission should carefully consider these important proposals and should modify its band plan to ensure that 500 MHz of contiguous spectrum is designated for primary GSO/FSS use between 18.1-18.8 GHz.<sup>8</sup>

As noted by PanAmSat, it is critical that any spectrum designated for GSO/FSS use be for primary use by only GSO/FSS operators and not shared with other services.<sup>9</sup> Commenters in this proceeding have demonstrated that the sharing of 18 GHz spectrum will not permit the ubiquitous

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<sup>4</sup> The Hughes proposal asserts that this 900 MHz of total spectrum can be adequately paired to permit two-way operations.

<sup>5</sup> TIA-SOUS has suggested that CARS users in the 18.3-18.58 GHz band should be authorized to utilize the lower CARS band at 13 GHz. Comments of TIA-SOUS at 5.

<sup>6</sup> Comments of Lockheed Martin at 2; TRW at 5.

<sup>7</sup> See Comments of Lockheed at 5; Comments of Hughes at 10-11; KaStar at 9; TRW at 6-7; TIA-SOUS at 5.

<sup>8</sup> The NPRM considered various technical requirements for intra-service sharing (e.g., the appropriate earth station antenna performance envelope, EIRP power flux-densities, and other technical criteria). Loral's position on these issues is set forth in its comments. Comments of Loral at 9-13.

<sup>9</sup> Comments of PanAmSat at 3.

deployment of small earth stations. Therefore, the relocation of certain FS facilities from the spectrum allocated to GSO/FSS operators for the ubiquitous deployment of small earth stations is essential and would be consistent with the primary focus of the NPRM: band segmentation.

The presence of point-to-point facilities are detrimental to the ubiquitous deployment of small earth terminals but CARS facilities provide the greatest obstacle to their deployment. CARS operators concede that they "can cause interference to satellite operators within a 45-mile oblong area from each private cable transmitter site."<sup>10</sup> According to the CARS Petitioners, "where private cable has been launched, its 18 GHz paths usually criss-cross an urban market and, therefore, saturate the market, making it unworkable for private cable operators to protect satellite operators."<sup>11</sup> Indeed, the CARS Petitioners admit that there "is no viable method for private cable operators to share the band with blanket-licensed earth stations that are highly interference-sensitive."<sup>12</sup> Loral agrees with the CARS Petitioners that licensing CARS services on a primary basis would foreclose deployment of ubiquitous Ka-band services wherever CARS applicants were licensed.<sup>13</sup>

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<sup>10</sup> See "Emergency Request for Immediate Relief" of The Independent Cable & Telecommunications Association, IB Docket No. 98-172 at p. 5. (filed Nov. 5, 1998) ("CARS Petition" or "CARS Petitioners").

<sup>11</sup> Id. at p. 6.

<sup>12</sup> Id. at (i).

<sup>13</sup> Loral is filing, concurrently with these reply comments, a formal opposition to the CARS Petition and the Petition for Interim Relief of the Fixed Point-to-Point Communications Section, Wireless Communications Division of the Telecommunications Industry Association (TIA-Fixed Section Petition), IB Docket No. 98-172 (filed Nov. 2, 1998).

For these reasons, it is essential that the FCC also uphold its proposal that any FS systems licensed in the 18 GHz band pursuant to an application filed and granted after September 18, 1998 (the NPRM release date) would have only secondary status in those bands designated for FSS use on a primary basis.<sup>14</sup> Unlimited construction of new FS facilities would endanger the successful deployment of Ka-band systems. Loral continues to oppose the permanent grandfathering of any FS operators in portions of the 18 GHz band allocated for the primary use of GSO/FSS operators and utilized for blanket licensing purposes. Loral suggests that the Commission instead adopt a sunset plan to ensure that terrestrial users transition out of primary FSS bands. In light of the fact that both satellite operators and terrestrial operators acknowledge that they cannot share this spectrum,<sup>15</sup> the Commission should consider relocating point-to-point terrestrial operators to other segments of the 18 GHz band and CARS operators to alternative bands in order to ensure the successful commercial deployment of Ka-band services and their corresponding ubiquitous earth stations.

### **Conclusion**

The Commission has correctly recognized that in order for satellite and terrestrial services to prosper in the 18 GHz band, band segmentation is required to ensure that the millions of Ka-band satellite earth stations can be deployed under a blanket licensing regime. Loral requests that

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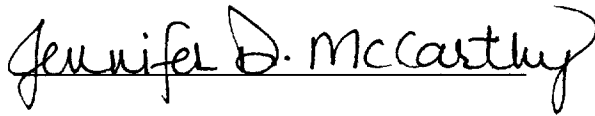
<sup>14</sup> NPRM at ¶ 40. Under the proposed plan, this decision would apply to the 18.3-18.55 GHz and 18.8-19.3 GHz bands. Loral's opposition to the CARS Petition and the TIA-Fixed Section Petition describe in greater detail why this policy is essential.

<sup>15</sup> NPRM at ¶ 41. Satellite operators will be unable to design their systems to avoid interference from existing terrestrial fixed service operations. Therefore, as the Commission suggests, relocation of some or all terrestrial facilities may be desirable. Id.

the Commission consider the alternative band segmentation plans discussed herein and adopt rules designating 500 MHz of contiguous unencumbered spectrum for GSO/FSS use in the 18.1-18.8 GHz band, to provide the total of 1000 MHz of unfettered spectrum required by Ka-band satellite systems for links to small ubiquitously deployed terminals.

Respectfully submitted,  
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